

# Appendix D-4:

## Construction Deliverables

This appendix describes the project deliverables for all restoration projects, including those restoration projects where the sponsor intends to construct the project using a "design-build" method. This guidance is intended to ensure that project sponsors, evaluators, and SFRB staff have the same expectations for grant agreement deliverables.

All restoration projects that include design elements shall follow four standard project development stages: Conceptual design, preliminary design, final design, and the construction phase. The deliverables for all projects are listed in the table below, with the construction and design-build deliverables highlighted. The deliverables are described in Appendices D 1-4.

**If the sponsor intends to deviate from the guidance in this appendix, the sponsor will need to answer specific questions in the salmon project proposal to be reviewed by the SRFB Review Panel during the application process.**

**Project Deliverables**

Project Type	Conceptual design	Preliminary design report	Permit applications	Design review comments	Final design report and drawings	Technical specification	Construction quantities and costs	Bidding documents	Permits	Cultural resources compliance	Control and tenure documentation	As-built
	Conceptual Design	✓										
	Preliminary Design	Application	✓	Optional	Optional					***		
	Final Design	Application	✓	Optional	✓	✓	✓	✓	Optional	***		
	Construction Project **	Application	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\*\* Design-build projects have an abbreviated set of design requirements prior to construction. See Appendix D-4.

\*\*\* Cultural resources compliance may be required if Sponsor is conducting ground disturbing activities during the design phases.

## **Conceptual Design**

For restoration projects, and preliminary and final design projects, the application requirements in the project proposal comprise an adequate conceptual design. The project proposal, described in Section 4 of *Manual 18, Salmon Recovery Grants*, includes questions detailing the project overview, salmon recovery context, proposed design procedures, alternates considered, plan view drawing, cost estimates, schedule, and other technical information.

## **Preliminary Project Design**

SRFB uses the term “preliminary project design” as either a final deliverable in a preliminary design project, or an intermediate deliverable of a final design or restoration project. Sponsors are required to submit to their SRFB grants manager the preliminary design deliverables before moving onto the final design and restoration phases. Please see Appendix D-2: Preliminary Design Deliverables for detailed information on the preliminary design process.

## **Final Project Design or Design-Build Requirements**

Before awarding the construction contract or initiating construction with the sponsor’s own crew, the sponsor must submit the final design deliverables to his/her SRFB grants manager. Please see Appendix D-3: Final Design Deliverables for detailed information on the final design process and required pre-construction deliverables.

## **Design-Build Projects**

Most SRFB sponsors complete final design reports before moving forward into construction. However, some SRFB sponsors prefer to proceed to construction after completing a preliminary design. SRFB refers to these projects as “design-build” projects.

Design-build projects should be considered only in cases where the sponsor, designer, and construction crew have extensive experience and have been successful with a particular project type. Additionally, design-build may be considered where design is straightforward and sponsor liability concerns are minimal. Design-build projects typically develop less detailed drawings before construction than other construction projects. In exchange, design-build documents must include a detailed written description of how various project elements will be located and constructed in the field. Design-build projects also require the project designer to provide a high level of construction oversight to ensure the project goes as planned. The sponsor should be prepared to develop detailed, as-built drawings following construction and submit them to SRFB staff before project close out. Sponsors must obtain all required permits before construction.

**A sponsor that intends to use the design-build method to complete a project will need to answer specific questions in the salmon project proposal to be reviewed by the SRFB Review Panel.**

The specific deliverables for design-build projects will be developed during the application process, based on the sponsor's application and the SRFB Review Panel's recommendations. The deliverables will be identified in the special conditions of the sponsor's project agreement.

## Construction Phase

This section identifies the required pre-construction deliverables, the construction management process, and "as-built" requirements.

### Pre-Construction Deliverables

1. **Control and Tenure Documentation.** Before construction, sponsors must provide control and tenure documentation of the property being restored. See *Manual 18, Salmon Recovery Grants*, page **Error! Bookmark not defined.** for more information.
2. **Cultural Resources Review.** Real property restored through RCO funding is subject to Governor's Executive Order 05-05 ([www.governor.wa.gov/execorders](http://www.governor.wa.gov/execorders)) or compliance with Section 106 of the National Historic Preservation Act. RCO requires documented compliance with the applicable cultural resources review process. For more information on cultural resources review, see *Manual 18, Salmon Recovery Grants*, Section 7, page **Error! Bookmark not defined.**
3. **Proof of Permits.** Before construction, sponsors must submit proof of permit receipt. Sponsors may have completed this pre-construction task in an earlier design phase.

### Construction Management

To minimize unintended errors that could be introduced during construction, SRFB highly recommends that the project designer has direct, on-site involvement during all phases of construction. Some projects sponsors may have extensive construction experience and knowledge, and may be able to perform daily construction supervision. SRFB recommends that the sponsor and designer agree to some sharing of construction supervision responsibilities with mutual confidence required of both entities. The designer/engineer should be confident that the on-site construction inspector will recognize any problems before construction is complete, and ensure that there is daily communication between the construction inspector and designer/engineer. Substantial changes during construction should be reviewed and approved by the project designer/engineer before implementation.

## **Post-Construction Deliverable: “As-Built Drawings”**

All changes made during construction must be documented. “As-built drawings” is the conventional term applied to project design drawings modified by the engineer/designer after completion of construction in order to clearly document what was constructed in the field. As-built drawings must be prepared if changes were made to the final design during construction and if the sponsor is using a design-build construction approach. These drawings shall be submitted to the SRFB grants manager after project completion.

In lieu of the conventional as-built drawings described above, SRFB also may allow the sponsor to submit the following as-built documentation provided it is clearly spelled out in the project agreement.

- Original final designs (if no changes were made during construction);
- Original final designs with a list of change orders describing the construction changes;
- A design memo from the designer/engineer with notations on the final design/construction plans identifying the changed elements of the project with photo-points and photographs showing the project post-construction.